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[TXD 14: Machinery for Fabric Manufacture]

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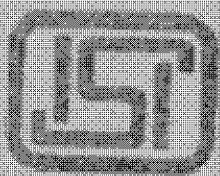
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Indian Standard

SPECIFICATION FOR PIRNS FOR WOOLLEN
AND WORSTED PLAIN LOOMS

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Indian Standard
SPECIFICATION FOR PIRNS FOR WOOLLEN
AND WORSTED PLAIN LOOMS

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Indian Standard

SPECIFICATION FOR PIRNS FOR WOOLLEN AND WORSTED PLAIN LOOMS

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 29 December 1969, after the draft finalized by the Textile Mill Accessories (Other Than Jute) Sectional Committee had been approved by the Textile Division Council.

0.2 In formulating this standard, due weightage has been given to international co-ordination among the standards and practices prevailing in different countries in addition to relating it to the practices in the field in this country. This has been met by deriving assistance from B.S. 3848: Part 1 : 1965 'West pirns for woollen and worsted yarns (Part 1: Pirns for use in shuttles fitted with tongues)' issued by the British Standards Institution.

0.3 Pirns covered in this standard are meant for use in shuttles after rewinding only. In case of pirns for use on spinning frames the bore dimensions shall be as prescribed by the buyer.

0.4 In this standard, the following have been excluded from the purview of standardization since it is felt that they vary with the type of loom:

- a) Sleeves for electrical feelers,
- b) Feeler slot,
- c) Bunch grooves, and
- d) Bore dimensions.

0.5 This standard contains clauses **4.2** to **4.5**, **5.3** and **8.3** which call for agreement between the buyer and the seller permitting the buyer to use his option for selection to suit his requirements.

0.6 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

*Rules for rounding off numerical values (*revised*).

1. SCOPE

1.1 This standard prescribes the requirements for west pirns for use in shuttles for woollen and worsted plain looms.

2. NOMENCLATURE

2.1 For the purpose of this standard, the nomenclature relating to various components of pirns shall be as indicated in Fig. 1.

3. TYPES

3.1 The pirns shall be of the following two types:

- a) Type 1 — half cone base pirns (*see* Fig. 1), and
- b) Type 2 — full cone base pirns (*see* Fig. 2).

4. MANUFACTURE

4.1 **General Design**—The pirns should generally be as shown in Fig. 1 or 2.

4.2 **Steps or Grooves**—The pirns shall have steps or grooves or both on the body as agreed to between the buyer and the seller.

4.3 **Timber**—The pirns shall be manufactured from fully seasoned timber (*see* IS:1141-1958*) of any of the species listed below or as agreed to between the buyer and the seller in case made of any other material:

TRADE NAME	BOTANICAL NAME
Birch	<i>Betula</i> sp.
Haldū	<i>Adina cordifolia</i> Hook. f.
Kaim (Kalam)	<i>Mitragyna parvifolia</i> (Roxb.) Korth.
Maple	<i>Acer</i> sp.
Mullilam	<i>Zanthoxylum rhetsa</i> DC. and <i>Zanthoxylum budrunga</i> DC.
White Cedar	<i>Dysoxylum malabaricum</i> Bedd.

4.4 **Shields**—If agreed to between the buyer and the seller, shields should be provided at the butt and the tip of the pirns. The shields shall be rigidly fixed.

4.4.1 The metal for the shields shall be as agreed to between the buyer and the seller.

4.5 **Finish**—The pirns shall be varnished, sand-papered or enamelled as agreed to between the buyer and the seller.

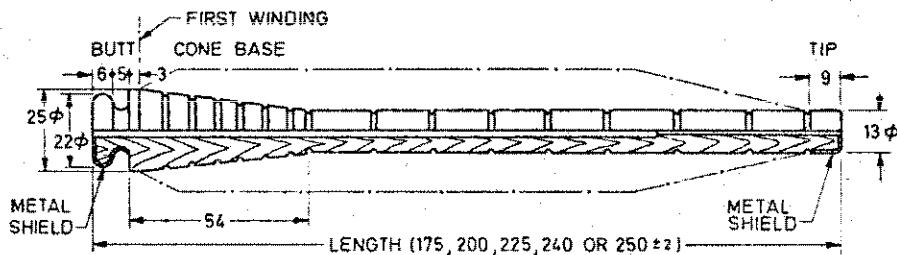
*Code of practice for seasoning of timber (*tentative*).

4.5.1 The pirns shall have a smooth finish.

4.6 Freedom from Defects — The pirns should be visually free from bark pockets, checks or cracks, gum ducts, knots, splits and any other defect which is likely to affect the life or usefulness of the pirns. For the description of various types of defects, see IS : 707-1968*.

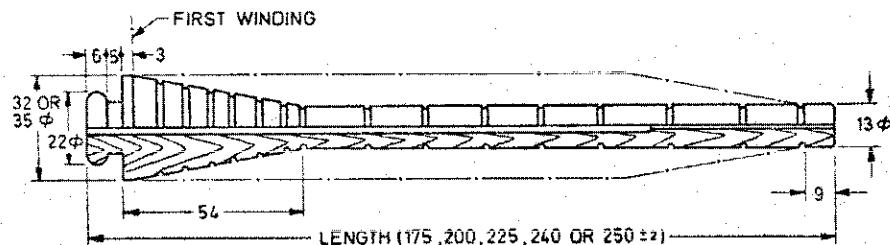
5. REQUIREMENTS

5.1 Dimensions — The dimensions of the pirns of Types 1 and 2 shall be as given in Fig. 1 and 2 respectively.



All dimensions in millimetres.

FIG. 1 A TYPICAL HALF CONE BASE PIRN FOR WOOLLEN AND WORSTED PLAIN LOOM



All dimensions in millimetres.

FIG. 2 A TYPICAL FULL CONE BASE PIRN FOR WOOLLEN AND WORSTED PLAIN LOOM

5.2 Tackiness — The pirns shall not be tacky when tested as prescribed in A-1.

*Glossary of terms applicable to timber and timber products (*first revision*).

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5.3 Weight — Collective weight of a number of pirns shall be as agreed to between the buyer and the seller when tested as prescribed in **A-2**. A tolerance of ± 4 percent on the specified weight shall, however, be permissible.

6. MARKING

6.1 Each pirn shall be marked at a suitable place with its type and the brand or trade-mark of the manufacturer.

6.1.1 The pirns may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well-defined system of inspection, testing and quality control during production. This system, which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

7. PACKING

7.1 The pirns shall be packed in wooden cases strong enough to withstand normal hazards of storage and transport.

7.1.1 Each case of pirns shall bear the following information:

- a) Manufacturer's name, initials or trade-mark; and
- b) Number of pirns in the case.

8. SAMPLING

8.1 Lot — All the pirns of the same type and manufactured from the same raw material delivered to a buyer against one despatch note shall constitute a lot.

8.2 The conformity of a lot to the requirements of this standard shall be determined on the basis of the tests carried out on the samples selected from it.

8.3 Unless otherwise agreed to between the buyer and the seller, the samples shall be selected as prescribed in **8.4** and **8.5**.

8.4 The number of cases to be selected from a lot shall depend on the size of the lot and shall be in accordance with col 1 and 2 of Table 1. The cases so selected shall constitute the gross sample.

8.5 The number of pirns to be tested and the criterion for conformity for each of the characteristics shall be as follows:

<i>Characteristic</i>	<i>No. of Pirns to be Tested</i>	<i>Criterion for Conformity</i>
Dimensions	According to col 3 of Table 1	Non-conforming pirns not to exceed the corresponding number given in col 4 of Table 1
Tackiness	According to col 5 of Table 1	Non-conforming pirns not to exceed the corresponding number given in col 6 of Table 1
Weight	Two sets of specified number of pirns from each case if the gross sample consists of 5 or less cases, or one set of specified number of pirns from each case if the gross sample consists of more than 5 cases	Each observed value to satisfy the requirement (see 5.3)

TABLE I SAMPLE SIZE AND PERMISSIBLE NUMBER OF NON-CONFORMING PIRNS

(Clauses 8.4 and 8.5)

NO. OF CASES IN THE LOT	NO. OF CASES TO BE SELECTED (GROSS SAMPLE)	NO. OF PIRNS TO BE SELECTED FOR TESTING DIMENSIONS	PERMISSIBLE NO. OF NON- CONFORMING PIRNS AMONGST THOSE SELECTED AS IN COL 3	NO. OF PIRNS TO BE SELECTED FOR TESTING TACKINESS FROM AMONGST THOSE SELECTED AS IN COL 3	PERMISSIBLE NO. OF NON- CONFORMING PIRNS AMONGST THOSE SELECTED AS IN COL 5
(1)	(2)	(3)	(4)	(5)	(6)
Up to 3	All	150	4	20	0
4 to 6	4	250	5	30	0
7 to 14	5	300	7	40	1
15 and above	10	450	9	50	2

A P P E N D I X A

(*Clauses 5.2 and 5.3*)

METHODS OF TEST

A-1. TACKINESS

A-1.1 Take a pirn out of the test sample (*see 8.5*). Place it in one pan of suitable balance, counterpoise it with weights in the second pan and add a 2·5-kg weight. Press down the pirn in the first pan with the thumb till the two pans are balanced. Hold the balance in that position for one minute and release the pressure of thumb slowly.

A-1.2 Report the pirn to be in conformity in respect of tackiness if:

- a) it does not show any apparent tendency to stick to the thumb; and
- b) the thumb impression on it, if any, can be wiped out with dry cotton.

A-2. WEIGHT

A-2.1 Take one set of pirns (*see 8.5*) and put it in the pan of a conditioning oven of suitable capacity capable of maintaining a temperature of 105° to 110°C. Start the conditioning oven. Note the constant weight of the pirns.

NOTE — The weight shall be taken to be constant when the difference between two consecutive weighings at an interval of one hour is less than 0·05 percent of the first of the two weighings.

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